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生物技术·植物遗传育种

面筋持水率与面筋延展性的关系*

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摘要 以昆明市面粉市场销售的22种小麦面粉为材料,用手洗法测定湿面筋含量、干面筋含量、面筋持水率和面筋延展性,通过相关分析、通径分析、多元线性回归等方法分析了面筋含量、面筋持水率与面筋延展性的关系。结果表明面筋持水率在不同材料间差异较大,面筋持水率与面筋延展性间存在极显著正相关,相关系数达到0.782**。通径分析结果表明,湿面筋含量、干面筋含量及面筋持水率对面筋延展性具有明显的直接和间接作用。通过多元线性回归分析得到的面筋延展性与湿面筋含量、干面筋含量、面筋持水率间的多元线性回归方程也较为可靠。因此,面筋持水率也可作为衡量面粉品质的指标之一。

关键词 湿面筋 干面筋 面筋持水率 延展性

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The Relationship between Gluten Moisture Absorption and Extensibility

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Abstract

Based on twenty-two varieties of flour from Kunming market in Yunnan province, tested wet gluten content, dry gluten content, gluten moisture absorption and extensibility by using hand-washing, to study on the relationship between gluten moisture absorption and extensibility by using correlate analysis, path analysis and multiple regression analysis. The results indicated that the variation of wet gluten content, dry gluten content, gluten moisture absorption and extensibility among different materials was obviously. Gluten moisture absorption had significant correlation with gluten extensibility, the correlation coefficient is 0.782**. It was shown that wet gluten content, dry gluten content and moisture absorption had direct and indirect effect to gluten extensibility obviously by the path analysis. On the other hand, the multiple regression equation between gluten extensibility and gluten quality was reasonable and practicable. Gluten moisture absorption should be regard as one of the indexes to scale flour quality.

Key words wet gluten content dry gluten content gluten moisture absorption gluten extensibility

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